

**Work Order ID 108786**

October-29-13 10:03:21 AM

**\*108786\***

Page 1

Item ID: 649.5111

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: LH Wiper Deflector

Start Date: 11/08/13 Start Qty: 5.00

**\*5\***

Cust Item ID:

Required Date: 11/08/13 Req'd Qty: 5.00

**\*5\***

Customer:

Reference:

Approvals: Process Plan: MCSDate: 13-10-30 Tooling:

Date:

Run Start **\*NR1\***

QC:

Date: SPC (Y/N):

Date:

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

649.5100

A

100

0.00

**\*100\***

Bandsaw

Memo

0.00

OK 13/11/205

Jeaspa Bandsaw

CUT AT 7.375" LONG

110

0.00

**\*110\***

Outsource5

Memo

0.00

Outsource process - Machining

ISSUE P/O:  
POSSIBLE SUPPLIER: ARCHER PRECISION

Certificate of conformaty required

sdnart

115

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

**\*115\***

Packaging

Memo

0.00

Packaging

5x 14-2-4

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%;"> <tr> <td style="width:33%;">           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </td> <td style="width:33%;">           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </td> <td style="width:33%;">           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </td> <td style="width:33%;">           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </td> </tr> </table>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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# Work Order ID 108786

November-25-13 10:32:42 AM

**\*108786\***

Page 1

Item ID: 649.5111

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: LH Wiper Deflector

Start Date: 11/08/13 Start Qty: 5.00 **\*5\***

Cust Item ID:

Required Date: 11/08/13 Req'd Qty: 5.00 **\*5\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
649.5100	A

100

0.00

**\*100\***

Bandsaw

Jeaspa Bandsaw

Memo

CUT AT 7.375" LONG

0.00

*NA*

110

0.00

**\*110\***

Outsource5

Outsource process - Machining

Memo

ISSUE P/O: 22172

POSSIBLE SUPPLIER:ETM

0.00

1-MANUFACTURE AS PER DWG

2- Black Anodize as per Dwg 647.960

Certificate of conformaty required

*13/11/25 MB*

**Work Order ID 108786**

November-25-13 10:32:42 AM

**\*108786\***

Page 2

Item ID: 649.5111

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: LH Wiper Deflector

Start Date: 11/08/13 Start Qty: 5.00

**\*5\***

Cust Item ID:

Required Date: 11/08/13 Req'd Qty: 5.00

**\*5\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
115	Receive & Inspect for Damage & Mat'l Certs	0.00							
<b>*115*</b>									
Packaging	Memo	0.00				5x		14-2-4	DAS 26 9-89
Packaging									
117	QC6- Inspect dimensions to drawing	0.00							
<b>*117*</b>									
QC	Memo	0.00							
Quality Control									
118		0.00							
<b>*118*</b>									
HandFinish	Memo	0.00							
Hand Finishing	REMOVE ALL PART MARKINGS								

Work Order ID 108786

\*108786\*

Page 3

November-25-13 10:32:42 AM

Item ID: 649.5111

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: LH Wiper Deflector

Start Date: 11/08/13 Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 11/08/13 Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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125

0.00

\*125\*

SprayPaint

Memo

0.00

Spray Painting

PRIME AS PER DWG, SEE NOTE #2

5

CR 14/02/27  
AB

135

QC14- Inspect Spray Paint

0.00

\*135\*

QC

Memo

0.00

Quality Control

5

m/14-03-03

170

Identify as per dwg &amp; Stock Location: ST419

0.00

\*170\*

Packaging

Memo

0.00

Packaging

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

5x

DAS  
28  
9-23

14-03-3



Work Order ID 108786

\*108786\*

Page 4

November-25-13 10:32:42 AM

Item ID: 649.5111

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: LH Wiper Deflector

Start Date: 11/08/13 Start Qty: 5.00

\*5\*

Cust Item ID:

Required Date: 11/08/13 Req'd Qty: 5.00

\*5\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

\*190\*

QC

Memo

0.00

Quality Control

14-03-3

14-03-03

# Picklist Print

October-29-13 10:03:20 AM

Page 1

Work Order ID: 108786

Parent Item: 649.5111

Parent Item Name: LH Wiper Deflector

Start Date: 11/08/13

Required Date: 11/08/13

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 13-10-23 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B6.000X6.000 7075-T6 BAR 6.000' X 6.000" (order in billets)		Purchased	No				f	31.6530		3.0729			

Location

Loc Qty

Loc Code

MAT

31.653

m126133

7.483

m126981

24.17

17127539 X ~~3~~ 3.0729 13/11/20



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

**FAULT CATEGORY**

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other _____
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APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03525			SHEET 1 OF 2	
	DWG NO. 649.5100	REV: A	PREPARED BY A. QUAN	DATE: 05/24/12	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
	DWG TITLE: WIPER DEFLECTORS				
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFFECT NEXT ORDER	
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED PART DIMENSIONS, ADDED RADIUS				

## SHEET 1, ZONE A1 IS:

### NOTES

- 1 MATERIAL ALUMINUM 7075-7651 PER AMS-QQ-A-250/12.
- 2 FINISH: ANODIZE PER MIL STD-A-8625, TYPE III, CLASS 2, COLOR BLACK.  
PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER,  
PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 3 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5110 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 12/07/11
- 4 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5111 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 04/11/12
- 5 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5112 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 05/24/12.
- 6 DEBURR AND BREAK ALL SHARP EDGES.
- 7 IDENTIFY IAW MPP-120. LASER ETCH P/N REVISION. 12 PT. CENTURY GOTHIC

108786 MCT  
13-10-30

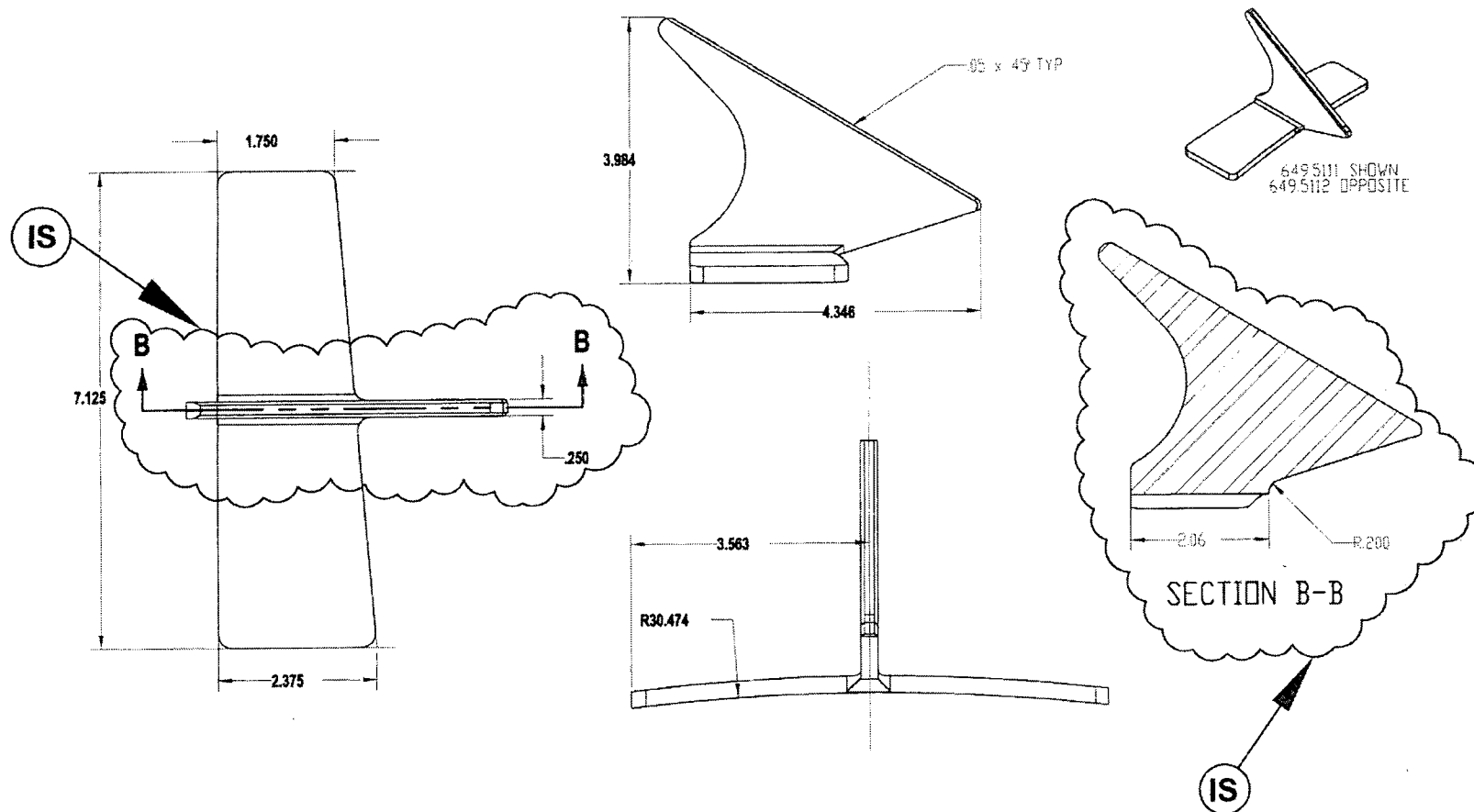
IS

DOCUMENTS EFFECTED:	<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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108786

**SHEET 2, ZONE B5 IS:**



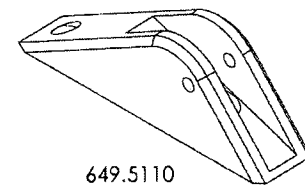
108786

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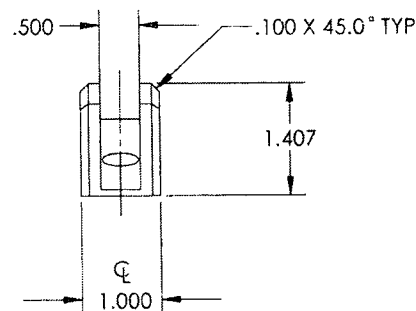
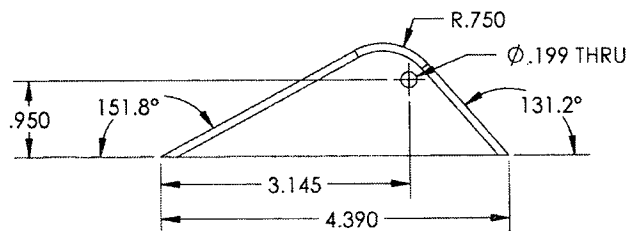
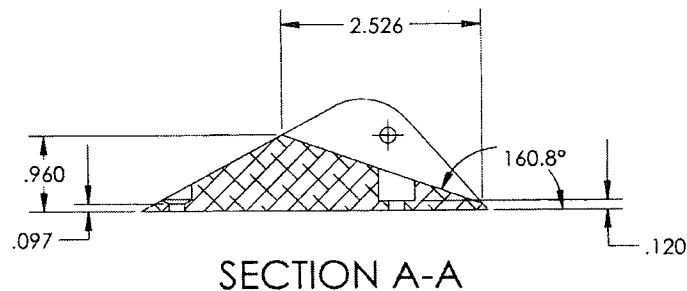
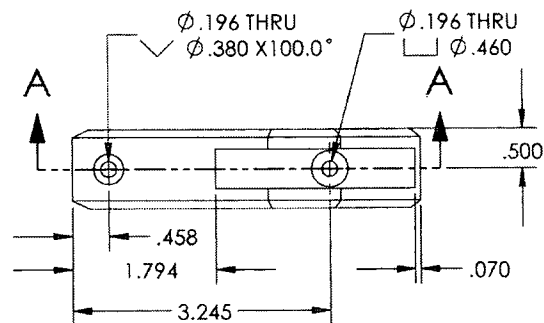
NOTES:

- 1 MATERIAL: ALUMINUM 7075-7651 PER AMS-QQ-A-250/12.
- 2 FINISH: ANODIZE PER MIL-STD-A-8625, TYPE III, CLASS 2, COLOR BLACK;  
PRETREAT PRC-DESOTO PR-148 ADHESION PROMOTER;  
PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 3 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5110 WIPER DEFLECTOR.SLDPRG, LAST MODIFIED 12/07/11.
- 4 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5111 WIPER DEFLECTOR.SLDPRG, LAST MODIFIED 04/11/12.
- 5 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5112 WIPER DEFLECTOR.SLDPRG, LAST MODIFIED 04/11/12.
- 6 DEBURR AND BREAK ALL SHARP EDGES.
- 7 IDENTIFY IAW MPP-120. LASER ETCH P/N REVISION, 12 PT. CENTURY GOTHIC.

REVISION			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION PP1		11/A
NIC	INITIAL RELEASE	12-07-11	P. BRAVO
A	INCORPORATED ECN 03525	04-11-12	P. BRAVO



649.5110



UNINCORPORATED ECN(s)

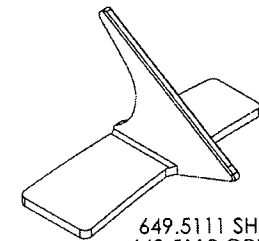
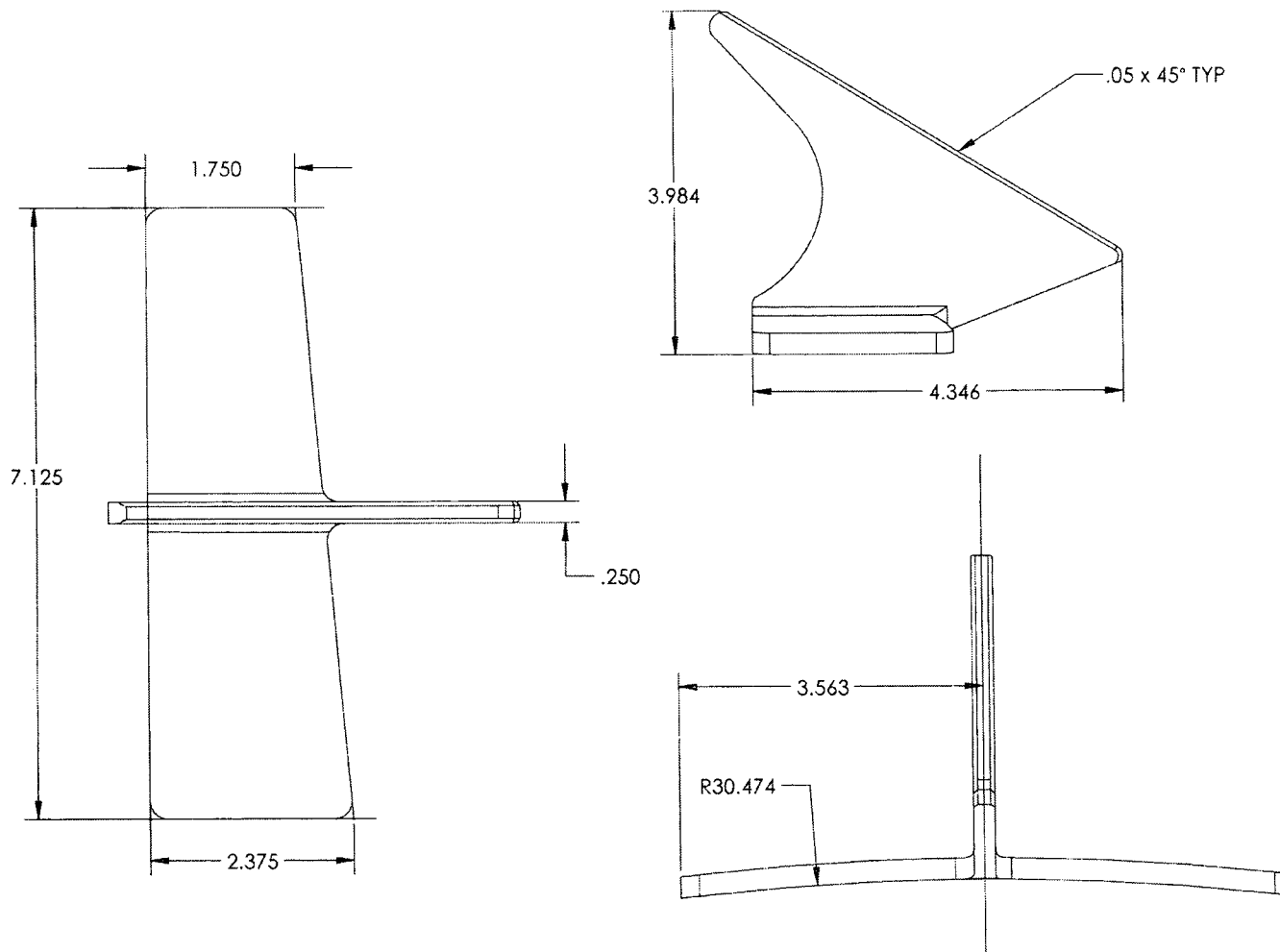
03525

QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.
	3	649.5112	RH WIPER DEFLECTOR	△	△ 5
	2	649.5111	LH WIPER DEFLECTOR	△	△ 4
	1	649.5110	WIPER DEFLECTOR	△	△ 3
PARTS LIST					
NEXT ASSY (S)			APICAL INDUSTRIES		
649.4700			2608 TEMPLE HEIGHTS DR.		
			OCEANSIDE, CA. 92056-3512 (760) 724-5300		
			WIPER DEFLECTORS		
			SCALE NONE		
			SHEET 1 OF 2		

108786

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REV	DESCRIPTION	DATE	APPROVED



649.5111 SHOWN  
649.5112 OPPOSITE

ORIGINAL DATE 12-01-15		APICAL INDUSTRIES	
DRAWN BY A. GUAN	CHECKED P. BRAYO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL 12-01-15	CONTRACT NO.	WIPER DEFLECTORS	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .03 3 PLACE DECIMALS ± .010 ANGLES ± .5°		SHEET B 07/MZ6	REV A
SCALE NONE		PART NO. 649.5100	
		SHEET 2 OF 2	

# ETM INDUSTRIES INC.

E.T.M. INDUSTRIES INC.  
310 HALL AVENUE  
BOX 610  
RENFREW, ON K7V 4E7  
Canada  
Ph: 613-432-6136  
Fax: 613-432-8212

## Pack List

Number: 116436

Date: 30-Jan-14

### To

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

### Ship To

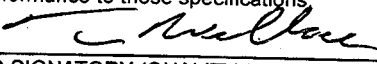
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-5246

Ph: 613-632-5200

Fax: 613-632-5246

Terms		Ship Via	
Net 30 days			
Quantity	Description		
1 each	Part: 649.5111 ✓ LH WIPER FAI PC, DART TO APPROVE FOR PRODUCTION SO: 16634 **LOT #88682 [PHYLLISB - 30/01/2014 9:39:00 AM]	Rev: A	Line: 6
<p style="text-align: center;">8814-4-4</p> <p>CERTIFICATE OF COMPLIANCE: "I hereby certify that the material described above is in conformance with applicable physical and dimensional specifications; that it was manufactured in accordance with applicable process specifications; and has been inspected to verify conformance to those specifications."</p> <p style="text-align: center;"></p> <p>APPROVED SIGNATORY (QUALITY ASSURANCE)</p>			

E.T.M. INDUSTRIES INC.  
310 HALL AVENUE  
BOX 610  
RENFREW, ON K7V 4E7  
Canada  
Ph: 613-432-6136  
Fax: 613-432-8212

## Pack List

Number: 116438

Date: 30-Jan-14

### To

DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

### Ship To

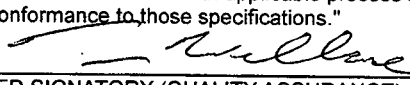
DART AEROSPACE  
1270 ABERDEEN STREET  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-5246

Ph: 613-632-5200

Fax: 613-632-5246

Terms		Ship Via
Net 30 days		
Quantity	Description	
4 each	Part: 649.5111 ✓ LH WIPER **FAI REQ'D INSPECTION REQ'D PRIOR TO FULFILLING BALANCE OF THE ORDER SO: 16634 PO: PO22172 Line: 6 **LOT #88682 [PHYLLISB - 30/01/2014 9:40:22 AM]  14-2-4  CERTIFICATE OF COMPLIANCE: "I hereby certify that the material described above is in conformance with applicable physical and dimensional specifications; that it was manufactured in accordance with applicable process specifications; and has been inspected to verify conformance to those specifications."   APPROVED SIGNATORY (QUALITY ASSURANCE)	



**ETM Industries Inc**

Page 1 of 5

AS9102 Revision A First Article Inspection

Form 1: Part Number Accountability

1. Part Number <b>649.5111</b>		2. Part Name <b>WIPER DEFLECTOR</b>		3. Serial Number <b>N/A</b>			
5. Part Revision Level <b>REV A</b>		6. Drawing Number <b>649.5100</b>		7. Drawing Revision Level <b>REV A</b>		8. Additional Changes <b>N/A</b>	
9. Manufacturing Process Reference <b>88682</b>		10. Organization Name <b>ETM Industries Inc.</b>		11. Supplier Code <b>N/A</b>		12. P.O. Number <b>PO22172 LINE 6</b>	
13. Detail FAI <input checked="" type="checkbox"/>		14. Full FAI <input checked="" type="checkbox"/>		Baseline Part Number including Revision Level <b>N/A</b>			
Assembly FAI <input type="checkbox"/>		Reason for Partial FAI: <b>Not Applicable</b>					
a) If above part number is a detail part only, go to Field 19 b) If above part number is an assembly, go to the "Index" section below.							
<b>INDEX of part numbers or sub assembly numbers required to make the assembly noted above.</b>							
15. Part Number		16. Part Name		17. Part Serial Number		18. FAI Report Number	
N/A		N/A		N/A		N/A	

1) Signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

2) Also indicate if the FAI is complete per Section 5.4: ☒ FAI Complete☐ FAI Not Complete

19. Signature MIKE YANTHA

20. Date 1/22/2014

21. Reviewed by

22. Date

31 Jan 14

23. Customer Approval

24. Date

**ETM Industries Inc**

Page 2 of 5

AS9102 Revision A First Article Inspection

Form 2: Product Accountability – Raw Material, Specifications and Special Process(es),  
Functional Testing

1. Part Number <b>649.5111</b>	2. Part Name <b>WIPER DEFLECTOR</b>	3. Serial Number <b>N/A</b>			4. FAI Report Number <b>N/A</b>
5. Material or Process – Name	6. Specification Number	7. Code	8. Special Process Supplier Code	9. Customer Approval Verification (Yes/No/N/A)	10. Certificate of Conformance Number
MATERIAL:	7050-T7651 PER AMS-QQ-A-250/12	N/A	N/A	N/A	CUSTOMER SUPPLIED
PROCESS:	ANODIZE PER MIL-STD-A-8625, TYPE III, CLASS 2, COLOR BLACK	N/A	N/A	N/A	VERDUN CERT #303620-00
PROCESS:	PRIME IAW MIL-P-23377J TYPEI CLASS N	N/A	N/A	N/A	TO BE COMPLETED BY CUSTOMER
PROCESS	IDENTIFY IAW MPP-120 LASER ETCH P/N REVISION 121 PT CENTURY GOTHIC	N/A	N/A	N/A	TO BE COMPLETED BY CUSTOMER
11. Functional Test Procedure Number	12. Acceptance report number, if applicable				
Not Applicable	Not Applicable				
13. Comments					
14. Prepared By     MIKE YANTHA			15. Date     1/22/2014		

**ETM Industries Inc**AS9102 Revision A First Article Inspection  
Form 3: Characteristic Accountability, Verification and Compatibility Evaluation

Page 4 of 5

1. Part Number <b>649.5111</b>				2. Part Name <b>WIPER DEFLECTOR</b>		3. Serial Number <b>N/A</b>		4. FAI Report <b>N/A</b>	
<b>Characteristic Accountability</b>				<b>Inspection / Test Results</b>					
5. Char. No.	6. Reference Location	7. Characteristic Designator	8. Requirement	9. Results	10. Designated Tooling	11. Non Conformance Number	14. Reference Documents		
14	SHEET 2	N/A	R.100	.0937	RADIUS GAUGE	N/A	N/A		
15	SHEET 2	N/A	R30.955	30.9587	CMM	N/A	N/A		
16	SHEET 2	N/A	.248	.249	CALIPERS	N/A	N/A		
17	SHEET 2	N/A	4.346	4.343	CALIPERS	N/A	N/A		
18	SHEET 1	N/A	PART CONTROLLED BY CAD MODEL. FILE NAME: 6495110 WIPER DEFLECTOR.SLDPR T, LAST MODIFIED 12/07/11	ACCEPT	VERIFY	N/A	N/A		
19	SHEET 1	N/A	PART CONTROLLED BY CAD MODEL. FILE NAME: 649.5111 WIPER DEFLECTOR.SLDPR T, LAST MODIFIED 04/11/12	ACCEPT	VERIFY	N/A	N/A		
20	SHEET 1	N/A	PART CONTROLLED BY CAD MODEL, FILE NAME: 649.5112 WIPER DEFLECTOR.SLDPR T, LAST MODIFIED 05/24/12	ACCEPT	VERIFY	N/A	N/A		
21	SHEET 1	N/A	DEBURR AND BREAK ALL SHARP EDGES	ACCEPT	VERIFY	N/A	N/A		

The signature indicates that all characteristics are accounted for; meet drawing requirements or are properly documented for disposition.

12. Prepared By MIKE YANTHA

13. Date 1/22/2014



Anodisation Verdun Inc.

Verdun Anodizing Inc.

3971, ave Verdun, Verdun (Quebec) H4G 1L1

AS 9100:2004

ISO 9001:2000

Certified

info@verdunanodizing.com

Tel: (514) 761-4531

Fax: (514) 769-4731

## CERTIFICATE OF SUB-CONTRACTOR

C  
U  
S  
T  
O  
M  
E  
R  
E.T.M. INDUSTRIES INC.  
310 HALL AVENUE  
BOX 610  
RENFREW  
Ontario K7V 4E7

ETM

S  
H  
I  
P  
T  
O  
E.T.M. INDUSTRIES INC.  
310 HALL AVENUE  
BOX 610  
RENFREW  
Ontario K7V 4E7

ETM

Customer Order No.	Order Date	Process Date	Certificate No.
98026	23/01/14	28/01/14	303620-00

PROCESS: MIL A-8625F1 TY III C1 2 NOIR No Seal

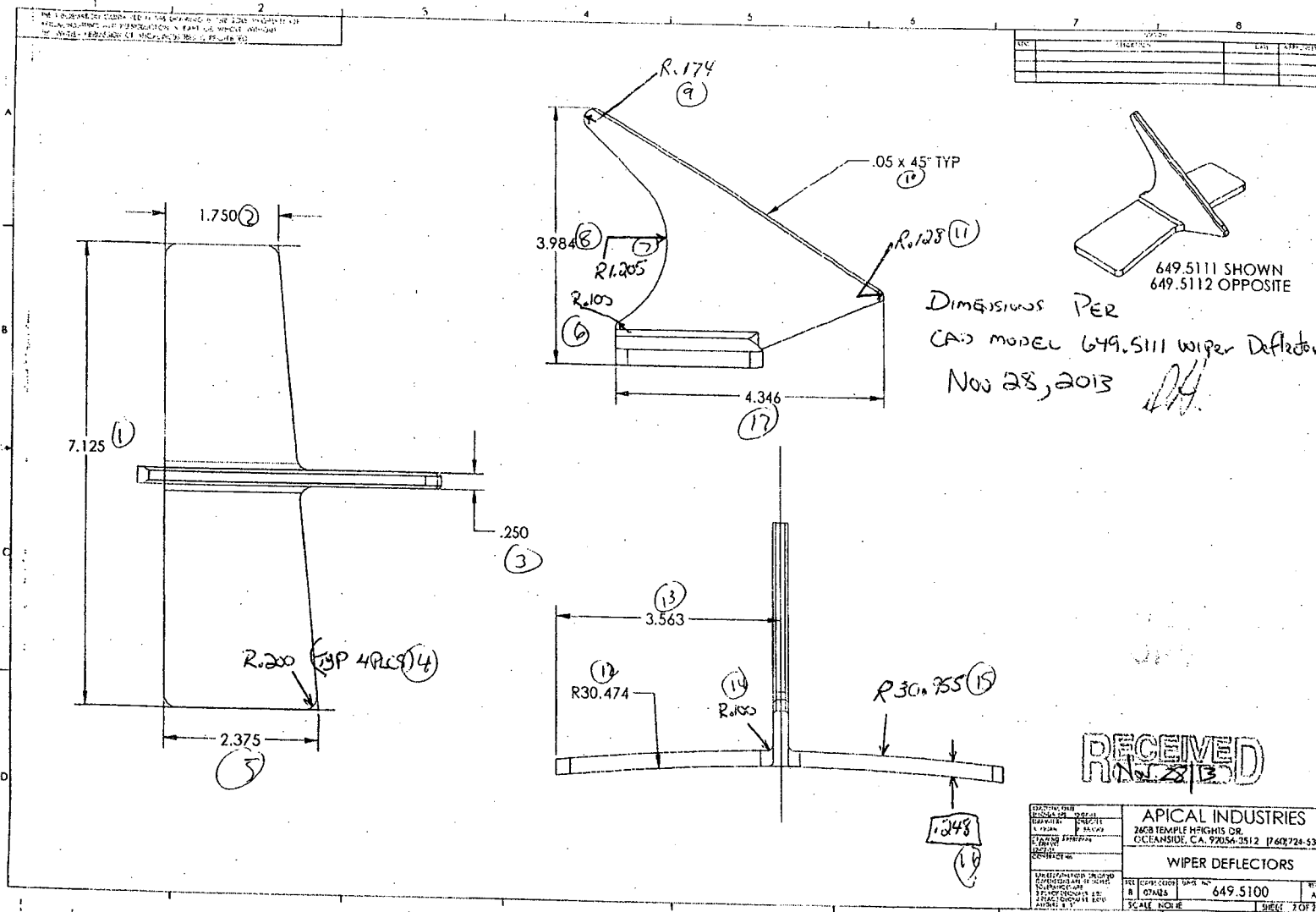
Item No.	Quantity	Description	Serial #
001	20.0	649.5111 LINE:001 LH WIPER REV.A JOB:88682 DUE:29 JAN.14	MAT:7075-T7651
002	19.0	649-5112 LINE:002 WIPER DEFLECTOR REV.A JOB:88681 DUE:29 JAN.14	MAT:7075-T7651

We hereby certify that the parts described above and furnished by E.T.M. INDUSTRIES INC. have been treated in accordance with the relevant specifications and that no substitution of materials has been made.

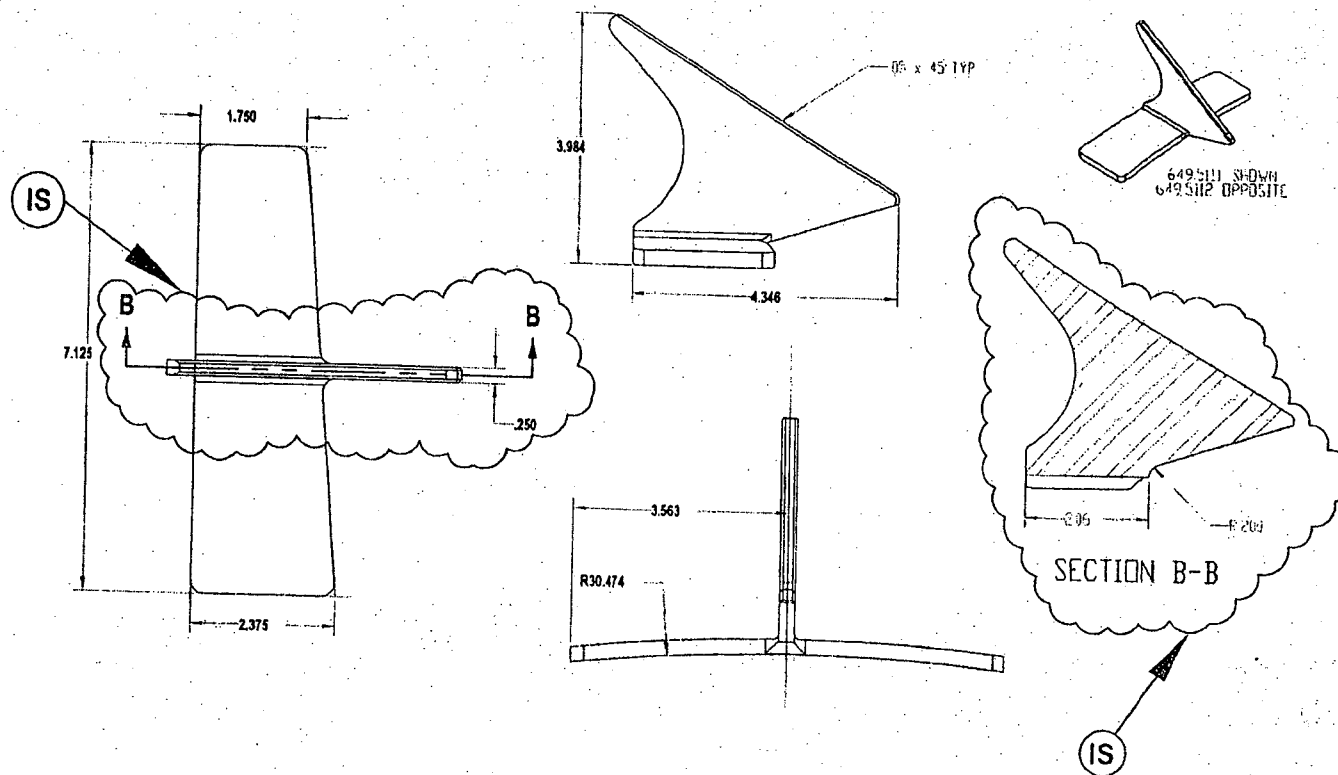


Inspector:

Verdun Anodizing Inc.



**SHEET 2, ZONE B5 IS:**



RECEIVED  
APR 23 1983

APICAL  
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 03525

SHEET 1 OF 2

DWG NO. 649.5100

REV: A

PREPARED  
BY

A. QUAN

DATE: 05/24/12

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: WIPER DEFLECTORS

APPROVED BY:

ENGR

MFG

QC

EFF:

NEXT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: REVISED PART DIMENSIONS, ADDED RADIUS

SHEET 1, ZONE A1 IS:

NOTES

1 MATERIAL ALUMINUM 7075-7651 PER AMS QQ-A-250-12

2 FINISH: ANODIZE PER MIL STD-A-8625, TYPE III, CLASS 2, COLOR BLACK.  
PRETREAT PER DESOTO PR-149 ADHESION PROMOTER,  
PRIME IAW MIL-P-23277J TYPE I CLASS H

(18) 3 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5110 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 12/07/11

(19) 4 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5111 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 04/17/12

(20) 5 PART CONTROLLED BY CAD MODEL  
FILE NAME: 649.5112 WIPER DEFLECTOR.SLDPRT, LAST MODIFIED 05/24/12

(21) 6 DEBUR AND BREAK ALL SHARP EDGES.

7 IDENTIFY IAW MPP-120 LASER ETCH P/N REVISION, 12 PT. CENTURY GOTHIC

- 2.50

IS

RECEIVED  
JUN 28 2012

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM

CHANGE CATEGORY  
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED  
☐ YES ☒ NO



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO22172

Purchase Order Date 11/25/2013

PO Print Date 1/13/2014

Page Number 1 of 3

Order From :

VC-ETM001

Ship To : DART AEROSPACE LTD

E.T.M. INDUSTRIES INC.  
310 HALL AVENUE  
BOX 610

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

RENFREW, ONTARIO K7V 4E7  
CANADA

Contact Name

Vendor Phone 613-432-6136

Buyer

Michael Gregoire

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

FedEx Priority First collect

Ship Acct:

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Exten P
	Line Comments		Promise Date				
	Delivery Comments						

5	649.5112P	Wiper Deflector	1/17/2014		20.00	\$150.00	\$3,000
			Yes		Each		
			2/7/2014				

\*\*\*NOTE\*\*\*

Manufacture as per drawing 649.5100 Rev.A  
B108918

\*\*\*\*\*

First Article Inspection required prior to fulfilling balance of the order.

Delivery pushed back due to mechanical failure from 1/17 to 2/4

Line Total: \$3,000

6	649.5111P	LH Wiper Deflector	1/17/2014		5.00 ✓	\$150.00	\$750
			Yes		Each		
			2/7/2014				

\*\*\*NOTE\*\*\*

Manufacture as per drawing 649.5100 Rev.A  
B108786

\*\*\*\*\*

First Article Inspection required prior to fulfilling balance of the order.

Delivery pushed back due to mechanical failure from 1/17 to 2/4

PO Instructions: \*\*\*NOTE\*\*\*

7075T6 BAR 6``x6`` material supplied

\*\*\*\*\*

Note:

1/13/2014